FIG.1

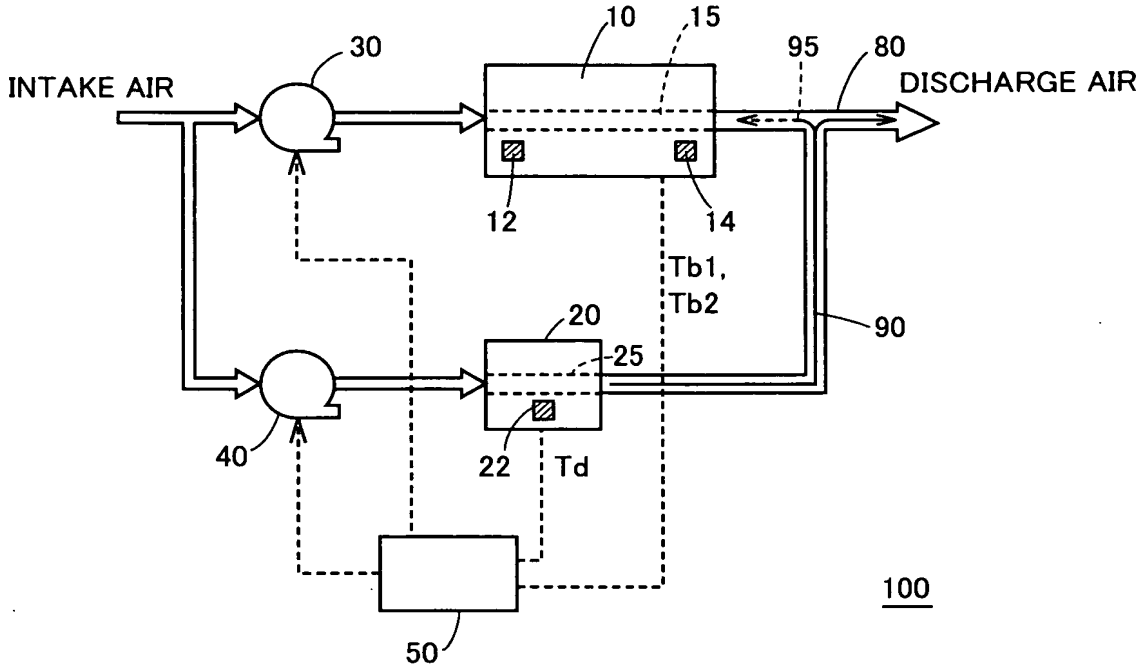
INTAKE AIR
30
10
15
95
80
DISCHARGE AIR
12
14
Tb1,
Tb2
20
25
90
40
22
Td
50
100

FIG.2

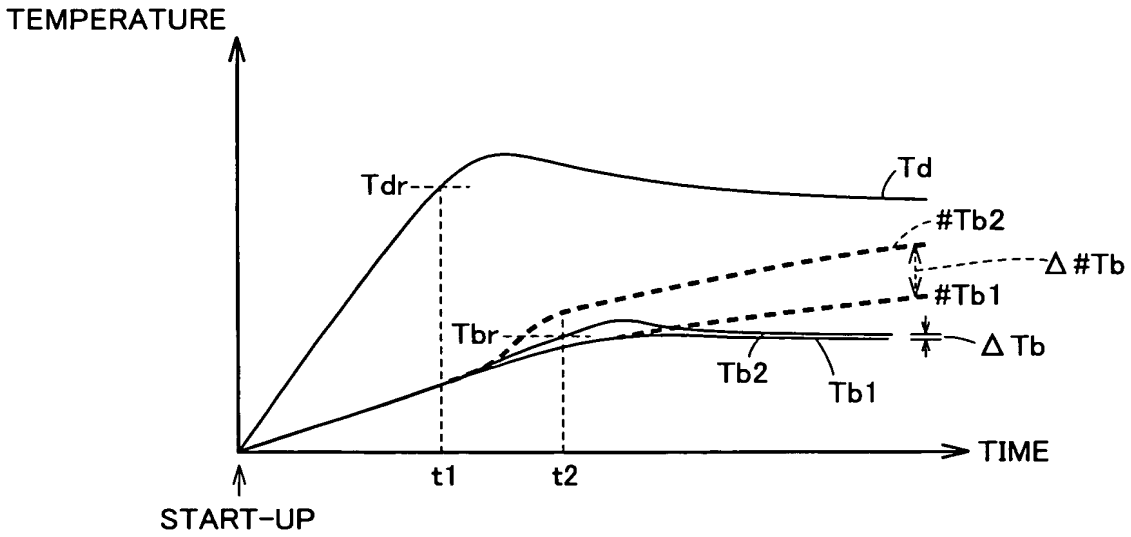
TEMPERATURE
Tdr
Td
#Tb2
Δ #Tb
#Tb1
Tbr
Δ Tb
Tb2
Tb1
TIME
t1
t2
START-UP

FIG.3

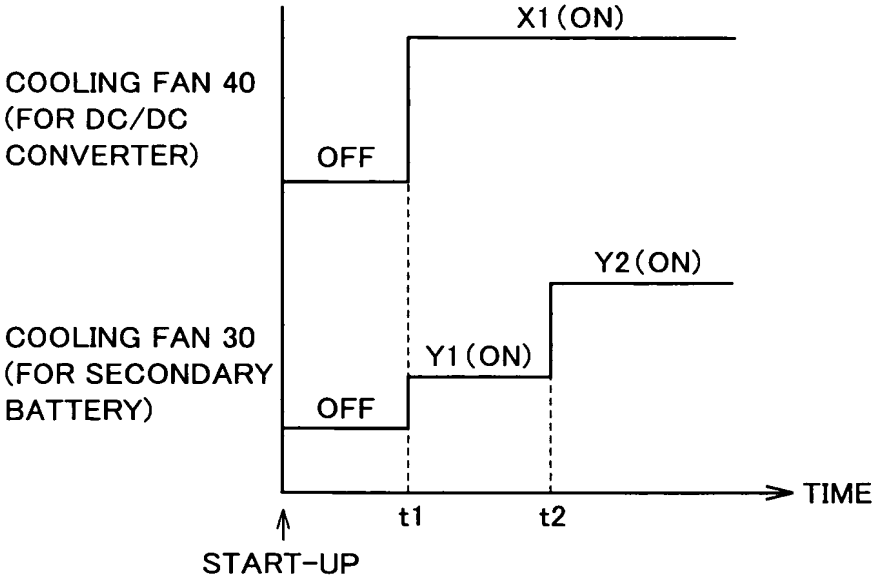
X1 (ON)
COOLING FAN 40
(FOR DC/DC
CONVERTER)
OFF
Y2 (ON)
COOLING FAN 30
(FOR SECONDARY
BATTERY)
Y1 (ON)
OFF
TIME
t1
t2
START-UP

FIG.4

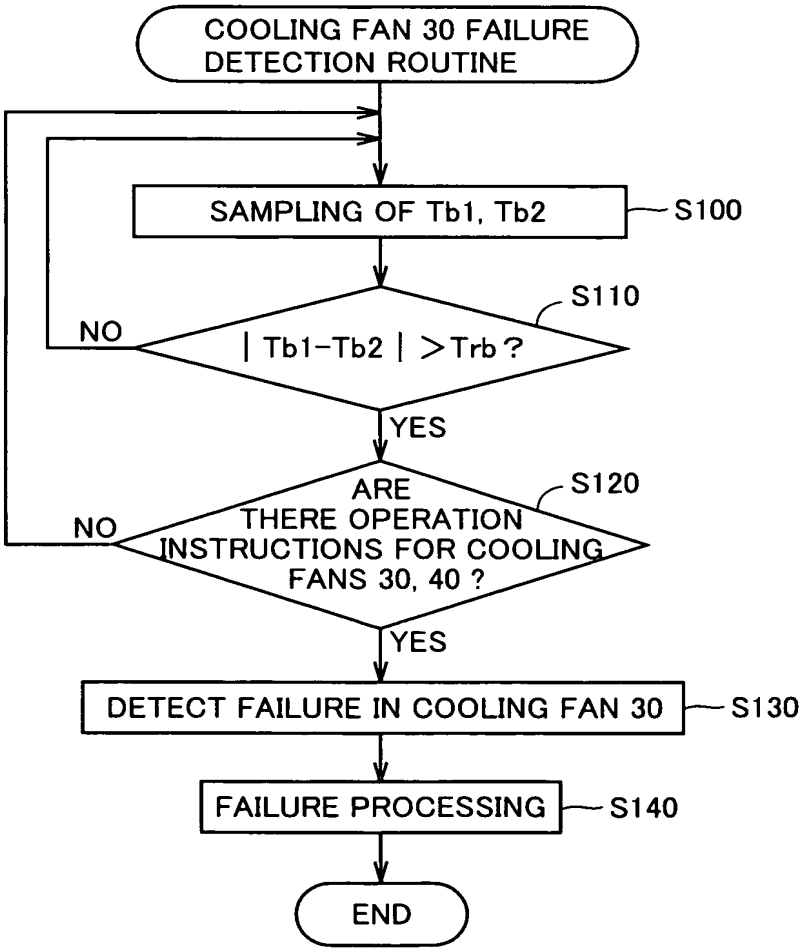
COOLING FAN 30 FAILURE DETECTION ROUTINE
SAMPLING OF Tb1, Tb2
S100
S110
NO
| Tb1-Tb2 | >Trb ?
YES
ARE THERE OPERATION INSTRUCTIONS FOR COOLING FANS 30, 40 ?
S120
NO
YES
DETECT FAILURE IN COOLING FAN 30
S130
FAILURE PROCESSING
S140
END

FIG.5

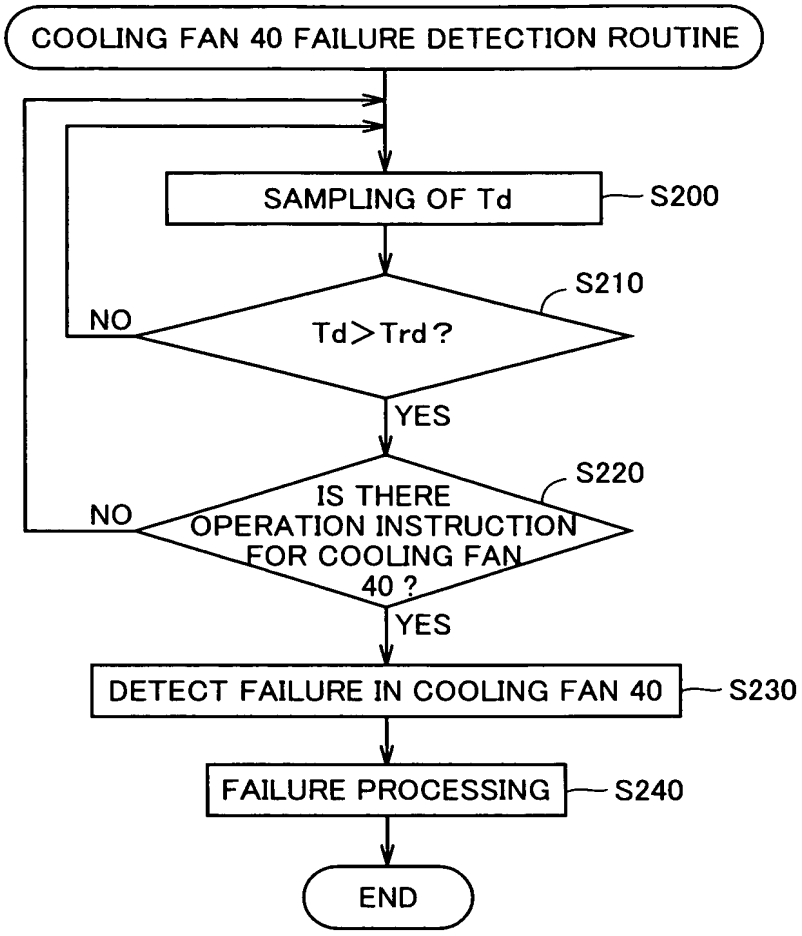
COOLING FAN 40 FAILURE DETECTION ROUTINE
SAMPLING OF Td
S200
S210
NO
Td>Trd?
YES
S220
IS THERE OPERATION INSTRUCTION FOR COOLING FAN 40 ?
NO
YES
DETECT FAILURE IN COOLING FAN 40
S230
FAILURE PROCESSING
S240
END

FIG.6

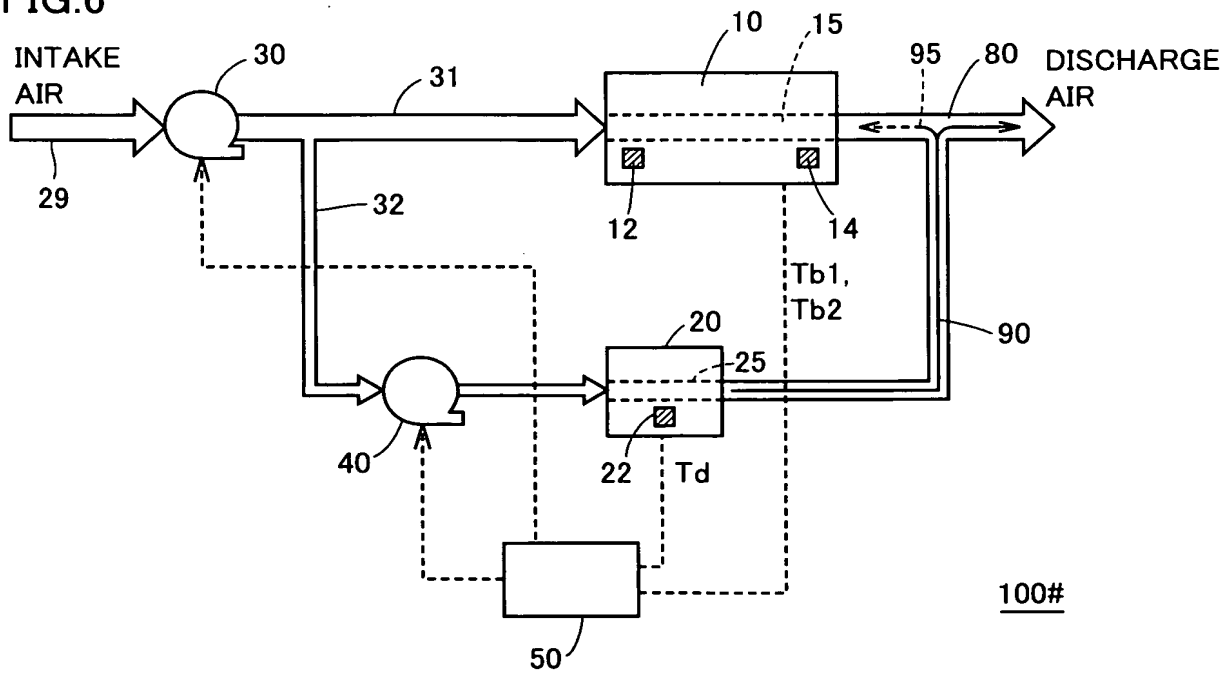
INTAKE AIR
30
31
10
15
95
80
DISCHARGE AIR
29
32
12
14
Tb1, Tb2
90
20
25
40
22
Td
50
100#

FIG.7

		CONVERTER TEMPERATURE Td	
		>Tdr (DC/DC CONVERTER REQUIRES COOLING)	≦Tdr (DC/DC CONVERTER REQUIRES NO COOLING)
BATTERY TEMPERATURE Tb	>Tbr (SECONDARY BATTERY REQUIRES COOLING)	OPERATE BOTH OF COOLING FANS 30, 40	COOLING FAN 30: OPERATION (COOLING) COOLING FAN 40: INOPERATIVE
	≦Tbr (SECONDARY BATTERY REQUIRES NO COOLING)	COOLING FAN 30: AUXILIARY OPERATION COOLING FAN 40: OPERATION (COOLING)	BOTH OF COOLING FANS 30, 40: INOPERATIVE